State of Montana
Office of Commissioner of Higher Education

Agency IT Plan
Fiscal Year 2012-2017

May 2012
Updated December 2012

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EXECUTIVE SUMMARY

The Office of the Commissioner of Higher Education (OCHE) is responsible for facilitating and communicating the Montana Board of Regents' Strategic Plan. A portion of this plan directs the Montana University System (MUS) to continually strive to improve the efficiency and effectiveness of university system operations. A sub-component of the efficiency and effectiveness goal is dedicated to information technology, where three primary goals shape the IT strategic directions for the MUS: 1) Enterprise Information Systems, 2) Network Connectivity, and 3) Data Warehousing.

Enterprise Information Systems: Develop an integrated information system with the goal of maximizing administrative efficiencies, allowing for seamless student enrollment between campuses, and promoting consistent business practices across all institutions.

Network Connectivity: Continue to develop and improve an education network that provides high speed telecommunication capabilities that link MUS institutions, provide connectivity to national research and education networks, and expand the reach of the MUS to remote areas of Montana.

Data Warehousing: Maintain and work to improve a system-wide data warehouse for the purpose of measuring the goals in Board of Regents' Strategic Plan, collecting and reporting official enrollment, developing linkages with K-12 and workforce data, and producing and monitoring the MUS Operating Budget.

The goals and objectives outlined in this plan align with Information Technology portion of the MUS Board of Regents Strategic Plan http://www.mus.edu/data/StratPlan/14_Goal_3_Information_Technology_2012.pdf.

SECTION 1: AGENCY ADMINISTRATIVE INFORMATION

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IT Inventory

The IT inventory database located at http://mine.mt.gov/enterpriseitinventory was updated on April 9, 2012. As required by MCA 2-17-524(3)(c) the plan will be updated by June 30th, 2012.

SECTION 2: AGENCY IT MISSION

To support the OCHE service mission by promoting, developing, delivering, and facilitating the use of information technology services and resources.

SECTION 3: AGENCY REQUIRED PROGRAMS

Information Security Management (ISM) Program General Description

The Office of Commissioner of Higher Education has implemented a department-wide (agency) information security management program compliant with §2-15-114, MCA and State Information Technology Systems Division *Information Security Programs* policy with adoption of the National Institute of Standards and Technology (NIST) Special Publication 800 series as guides for establishing appropriate security procedures. This is in alignment with the State of Information Technology Service's direction for an enterprise approach to protect sensitive and critical information being housed and shared on State and/or external/commercial information assets or systems.

As described in NIST SP 800-39, the agency has adopted the Information Risk Management Strategy to guide the agency through information security lifecycle architecture with application of risk management. This structure provides a programmatic approach to reducing the level of risk to an acceptable level, while ensuring legal and regulatory mandates are met in accordance with MCA §2-15-114.

The agency's program has four components, which interact with each other in a continuous improvement cycle. They are as follows:

- Risk Frame – Establishes the context for making risk-based decisions
- Risk Assessment – Addresses how the agency will assess risk within the context of the risk frame; identifying threats, harm, impact, vulnerabilities and likelihood of occurrence
- Risk Response – Addresses how the agency responds to risk once the level of risk is determined based on the results of the risk assessment; e.g., avoid, mitigate, accept risk, share or transfer
- Risk Monitoring – Addresses how the agency monitors risk over time; "Are we achieving desired outcomes?"

The agency's information security management program is challenged with limited resources; manpower and funding. While alternatives are reviewed and mitigation efforts are implemented the level of acceptable risk is constantly challenged by the ever changing technology and associated risks from growing attacks and social structure changes.

Future Security Program Plans

Working with the campuses of the Montana University system, we plan to review, and rewrite if necessary, various security-related policies to ensure compliance with state and federal guidelines. We also plan to develop a more comprehensive incident response plan and continue to look for innovative and cost effective tools to manage IT related risks.

Continuity of Operations (COOP) Capability Program General Description

The Montana University System has not joined with the Department of Administration *Continuity Services* for the development of Continuity of Operations Capabilities.

Future COOP Program Plans

The Montana University System will work to provide plans and structure to facilitate response and recovery capabilities to ensure the continued performance of the State Essential Functions of Government.

SECTION 4: AGENCY IT PLAN – GOALS & OBJECTIVES

Goal Number 1:

IT Goal 1   Enterprise Information System

Description:

Develop an integrated information system with the goal of maximizing administrative efficiencies, allowing for seamless student enrollment between campuses, and promoting consistent business practices across all institutions.

Benefits:

Consolidating to a single enterprise-wide information system will greatly enhance students' ability to enroll seamlessly between campuses, require campuses to adopt shared business practices, enhance opportunities of joint academic programs, and increase the efficiency of overall IT and administrative operations.

Which state strategic goal(s) and/or objective(s) does your goal address?

GOAL 1: ACHIEVE MAXIMUM VALUE OF INFORMATION THROUGH THE ACTIVE MANAGEMENT OF INFORMATION TECHNOLOGY

OBJECTIVE 1: INCREASE USE OF CONSOLIDATED PLATFORMS AND SHARED SERVICES

Supporting Objective/Action

Objective 1-1   Move from an incremental approach to system-wide, single effort

Describe the business requirements or business problem driving this objective.

Progress toward an integrated information system in the MUS has been incremental and separated by each side of the system (i.e. MSU side/UM side). The Commissioner of Higher Education and Board of Regents has recently adopted an Integrated Information System as one of the top system initiatives in the MUS. This initiative focuses on integrating the various enterprise information systems on the MSU and UM sides into ONE.

Describe the benefits to be derived from the successful completion of this objective.

- Improved access and affordability by allowing students to seamlessly enroll between campuses:
    - complete one application for admission that works for all MUS campuses;
    - combine enrollments from multiple MUS campuses on a single transcript;
    - package financial aid based on multiple campus enrollments
- Development of virtual college capabilities that combine assets and opportunities from all campuses
- Reduced duplicative IT costs
- Centralized some administrative services (ex. payroll)

- Increased opportunities for joint academic programs
- Standardized data codes in order to produce quality and easily accessible information

Describe the anticipated risks associated with this objective. (e.g., risks associated with inaction or not completing this objective; risks associated with completing this objective).

- Inability to maximize efficiencies
- Increased cost of operations
- Inability to truly act as one system

What is the timeframe for completion of this objective?

This is a multiple year project that is estimated to be completed by 2017 (if fully funded by 2013 Legislature)

Goal Number 2:

IT Goal 2:   Network Connectivity

Description:

Continue to develop and improve an education network that provides high speed telecommunication capabilities that link MUS institutions, provide connectivity to national research and education networks, and expand the reach of the MUS to remote areas of Montana.

Benefits:

The operation and expansion of a ultra-high speed network is critical to the MUS's ability to provide affordable and accessible access to higher education for all Montanans, expand research and development, utilize state of the art technology, and contribute to economic development.

Which state strategic goal(s) and/or objective(s) does your goal address?

GOAL 1: ACHIEVE MAXIMUM VALUE OF INFORMATION THROUGH THE ACTIVE MANAGEMENT OF INFORMATION TECHNOLOGY

OBJECTIVE 3: STRENGTHEN AND EXPAND INFORMATION TECHNOLOGY PARTNERSHIPS

Supporting Objective/Action

Objective 1-1   Partner with SITSD to Expand Usage of Northern Tier

Describe the business requirements or business problem driving this objective.

State Executive branch government will be joining the Montana University System's ultra-high speed telecommunications. The University system is currently upgrading the network to support higher capacity and additional locations. The executive branch of State government will be joining that effort which will result in substantial cost savings and the potential to expand network capacity to rural areas of the state that are currently underserved. The University System and the State Department of Administration (State Information Technology Services Division) staff will begin to implement this project immediately.

Describe the benefits to be derived from the successful completion of this objective.

Efficiencies/Cost Savings: Both the State and University System will reduce annual costs and at the same time increase available bandwidth and capacity on a shared "core" of their networks.

Expansion: Saving money on the network core allows that cost saving to be reinvested to improve network connectivity in other parts of the network, particularly those parts that serve areas of the State that are underserved or need additional capacity.

Collaboration: This plan continues and expands a 20-plus year partnership between the State and University System on networking, and will increase opportunities for collaboration on distance education, IT operations, research and development. The enhanced network will also increase State opportunities for national collaborations and partnerships between federal, state, local governments, universities, and private companies. Finally, upgrading links in what are typically rural areas will expand partnerships between the State and local providers, allowing the State to expand its current very important role as an "anchor tenant" of telecommunications services in those areas.

Describe the anticipated risks associated with this objective. (e.g., risks associated with inaction or not completing this objective; risks associated with completing this objective).

- Inability to maximize efficiencies for SITSD and the MUS

What is the timeframe for completion of this objective?

This objective is projected to be completed by September 2012.

Goal Number 3:

IT Goal 3:   Data Warehousing

Description:

Maintain and work to improve a system-wide data warehouse for the purpose of measuring the goals in Board of Regents' Strategic Plan, collecting and reporting official enrollment, developing linkages with K-12 and workforce data, and producing and monitoring the MUS Operating Budget.

Benefits:

Access and usability of centralized higher education information is a critical component in the development and improvement of public policy and informed decision making.

Which state strategic goal(s) and/or objective(s) does your goal address?

GOAL 3: BUILD AN INFRASTRUCTURE / ARCHITECTURE THAT PROVIDES CITIZENS AND EMPLOYEES OF THE STATE ACCESS TO INFORMATION HOWEVER AND WHENEVER THEY NEED IT

OBJECTIVE 1: EXPLORE AND IMPLEMENT TECHNOLOGY TO ENHANCE ACCESSIBILITY, AVAILABILITY, AND USABILITY OF INFORMATION

Supporting Objective/Action

Objective 1-1   Add human resources data to the MUS Data Warehouse

Describe the business requirements or business problem driving this objective.

To date, the MUS has developed data warehouses for student, financial aid, and finance/budget information. There is a growing need to centrally collect and store data from the human resources side of Banner.

Describe the benefits to be derived from the successful completion of this objective.

Benefits include:

1) On demand centralized access to human resource, personnel, and benefits information in the MUS
2) Governor's Office and Legislature will have access to MUS human resource data
3) MUS Self-funded Benefits program will use the data to better manage the MUS plan
4) The Board of Regents will have better management information to make informed decisions.

Describe the anticipated risks associated with this objective. (e.g., risks associated with inaction or not completing this objective; risks associated with completing this objective).

- Lack of information

What is the timeframe for completion of this objective?

This objective is projected to be completed by March 2013.

SECTION 5: IT INITIATIVES (FY2012 – FY 2017)

Initiative 1   Integrated Information System (per Board of Regents approval)

Description: Integrate the University System's various enterprise information systems into ONE in order to increase student access and services, improve academic coordination, and increase administrative efficiencies.

EPP Number (if applicable)

Initiative 2   <Title>

Description: <>

EPP Number (if applicable)

Initiative 3   <Title>

Description: <>

EPP Number (if applicable)

Initiative 4   <Title>

Description: <>

EPP Number (if applicable)

Initiative 5   <Title>

Description: <>

EPP Number (if applicable)

(Copy and paste the above format here to describe additional IT Initiatives.)

SECTION 6: ENTERPRISE ALIGNMENT

Communities of Interest Participation

- ☑ Government Services

- ☐ Public Safety

- ☐ Human Resources

- ☐ Environmental

- ☑ Education

- ☑ Economic

- ☐ Cultural Affairs

- ☐ Finance

SECTION 7: PLANNED AGENCY IT EXPENDITURES

Expense Category	FY2012		FY2013		FY2014		FY2015		FY2016		FY2017
Personal Services	441,886		466,184		489,493		513,968		524,247		534,732
Operating Expenses	164,454		167,743		171,098		174,520		178,010		181,571
Initiatives											
Other expenditures											
Totals	606,340		633,927		660,591		688,488		702,257		716,303

SECTION 8: ADDITIONAL INFORMATION - OPTIONAL

Other types of information that support the agency's IT Plan. Some examples might include other COI participation, reference to other IT plans such as GIS plan, eGovernment plan, security plan, staffing issues and constraints, etc.